

Delta Council Annual Meeting

May 6, 2011

Update on the Flood of 2011




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1927 Flood




Legend

 1927 Flooded Area



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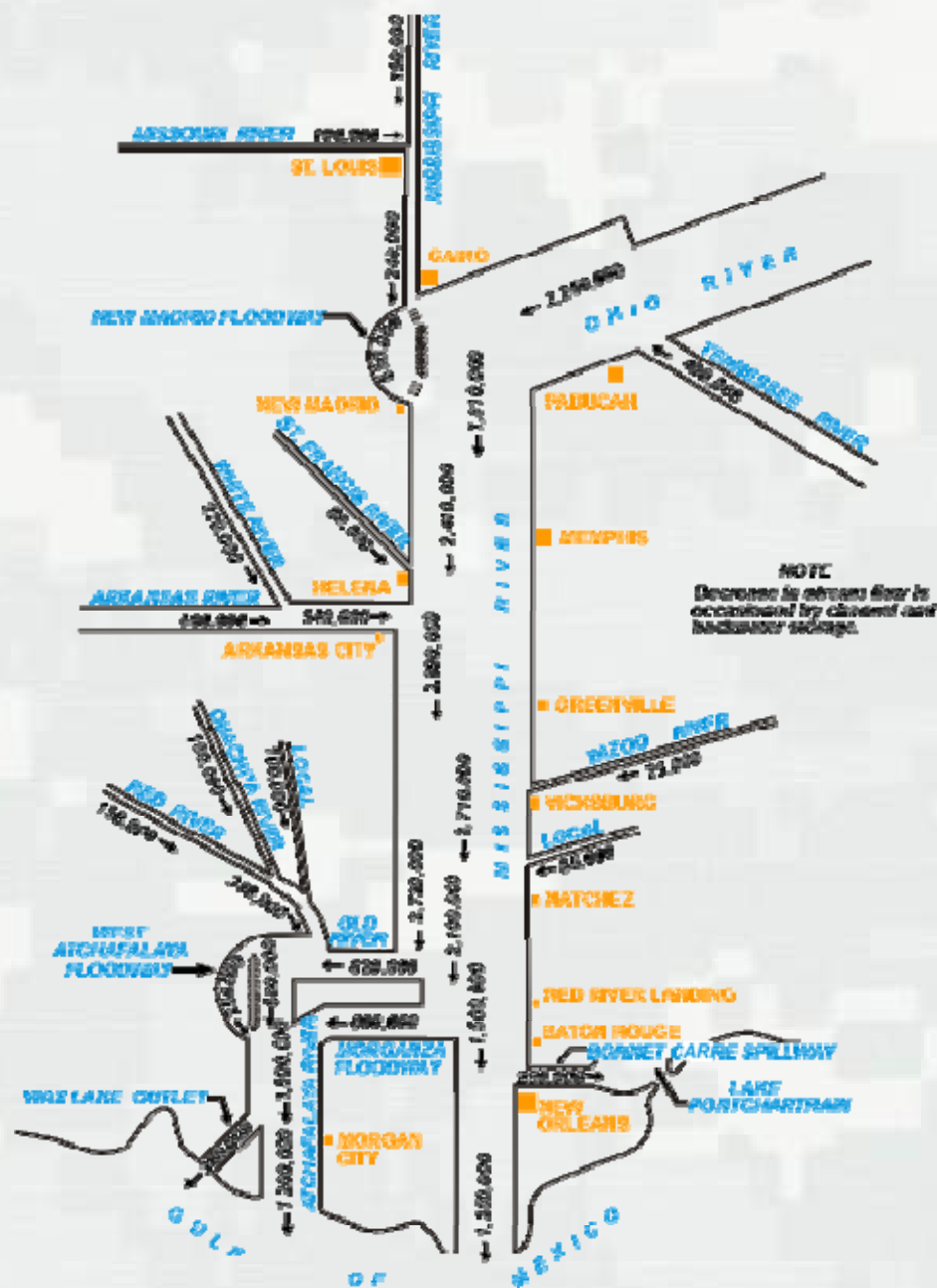


	Flooded Area
200	Levee Breaks
18,000	Sq. Mi. Flooded
246	People Drowned
700,000	People Homeless
165,000	Head of Livestock Drowned
\$346,000,000	Property Damage

1927 Flood Levee Breaks Vicksburg District



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PROJECT DESIGN FLOOD (58A - EN) CUBIC FEET PER SECOND SEPT 1958



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Vicksburg Gage

1927 - Gage 62.0
(if levees had
held)

2011 - Gage 57.5

1927 - Gage 56.2
(as happened)

1937 - Gage 53.2

1929 - Gage 52.9

1973 - Gage 51.6

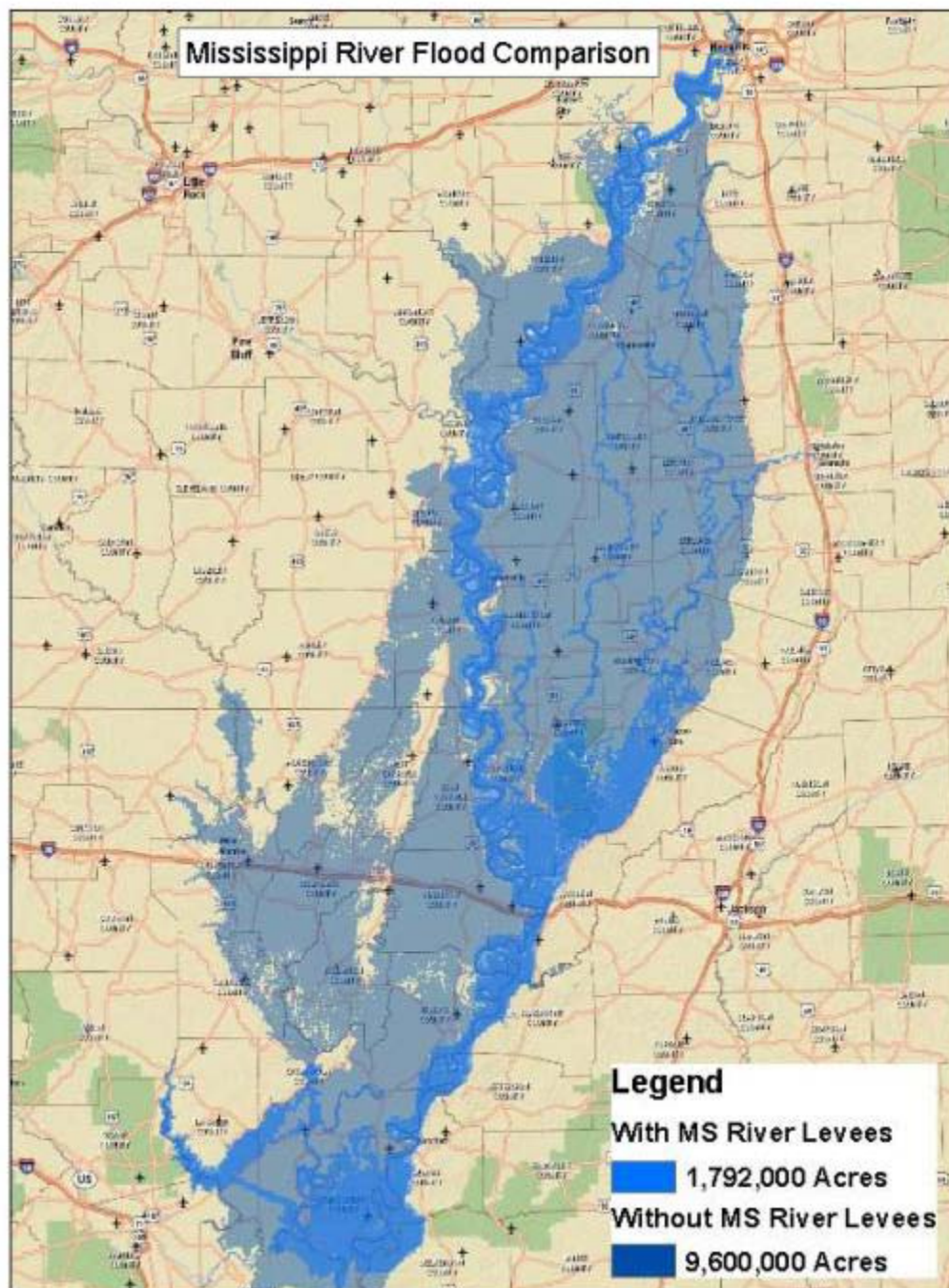
2008 - Gage 51.0

1932 - Gage 49.5

1983 - Gage 49.3

1945 - Gage 47.5

1961 - Gage 44.9



Historical and Projected Crests – 05/05/11

Gauge	1927	1937	1973	2008	2011 Crest/ Projected Crest	2011 Crest or Projected Date
Cairo	56.4	59.5	55.7	53.8	61.0	Crested on 2 May
Memphis	45.8	48.7	40.5	37.7	48	11 May
Arkansas City	60.4	53.9	47.6	45.3	53.5	16 May
Greenville	65.4**	63**	58.2	57.3	64.5	17 May
Vicksburg	56.2**	53.2**	51.6	51	57.5	20 May
Natchez	56.60**	58.04**	56.70	57.03	64.0	22 May
Steele Bayou (riverside)*			101.32	100.1	107	20 May
Yazoo Backwater Area*			101.48	92.18	95	15 June

* 1927 and 1937 Data N/A due to lack of backwater levees

**Adjusted to reflect change in gauge elevation

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Status of Mississippi River Levees



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Port of Rosedale

Elevation 165.0



Impacts

- Port dock, facilities, and road will stay above inundation levels at current projections
- One industry could be facing water threat in building



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Port of Greenville

Elevation 152(north) 136 (south)



Impacts

- At 55', (133.52 elevation) there will be water on the dock
- At 59', (137.52 elevation) there will be water in a warehouse floor
- At 60', (138.52 elevation) there will be water covering parts of the road
- At 60', industries on the small (south) fill will have water 1 to 5 feet deep.



Port of Vicksburg

Elevation 110.0

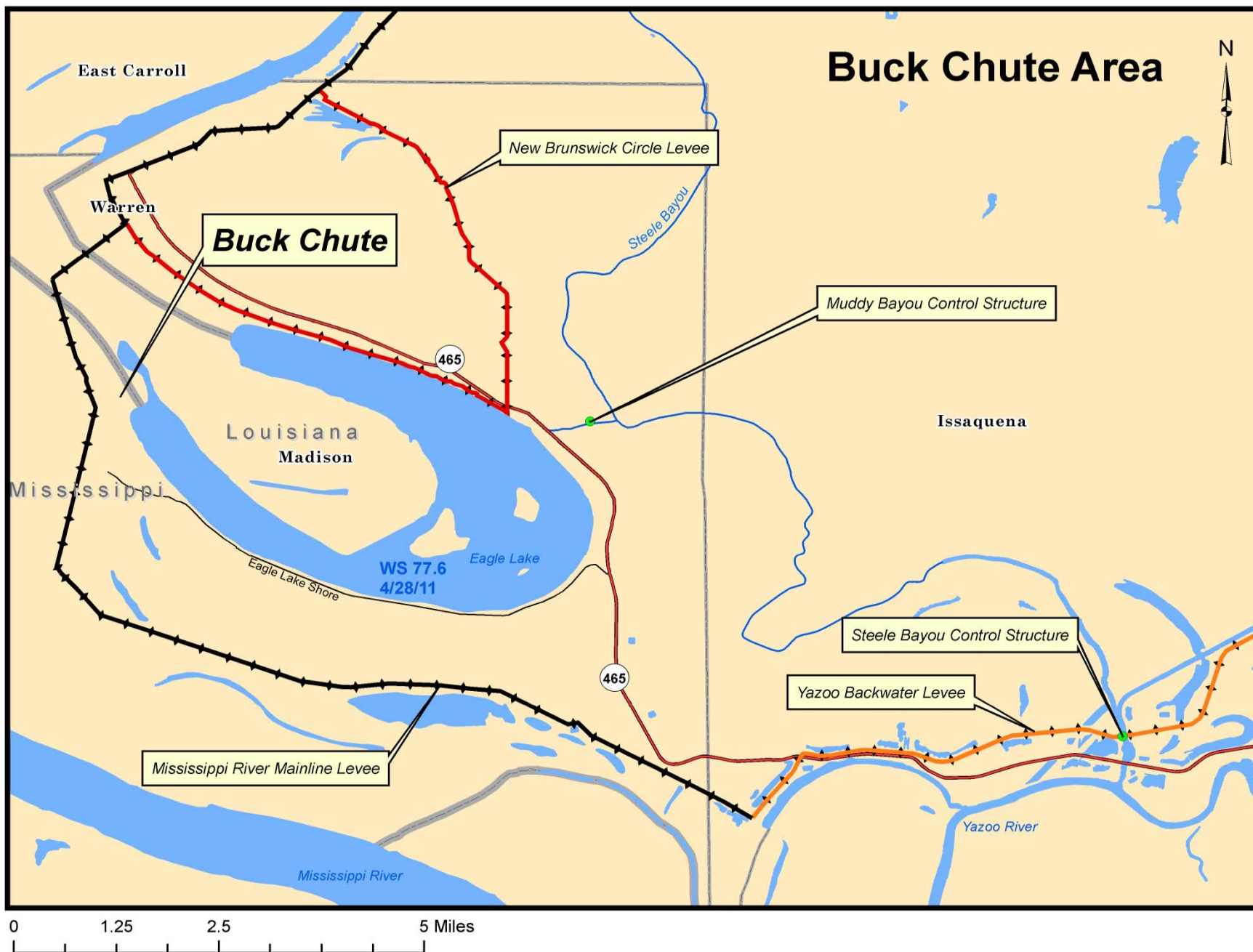


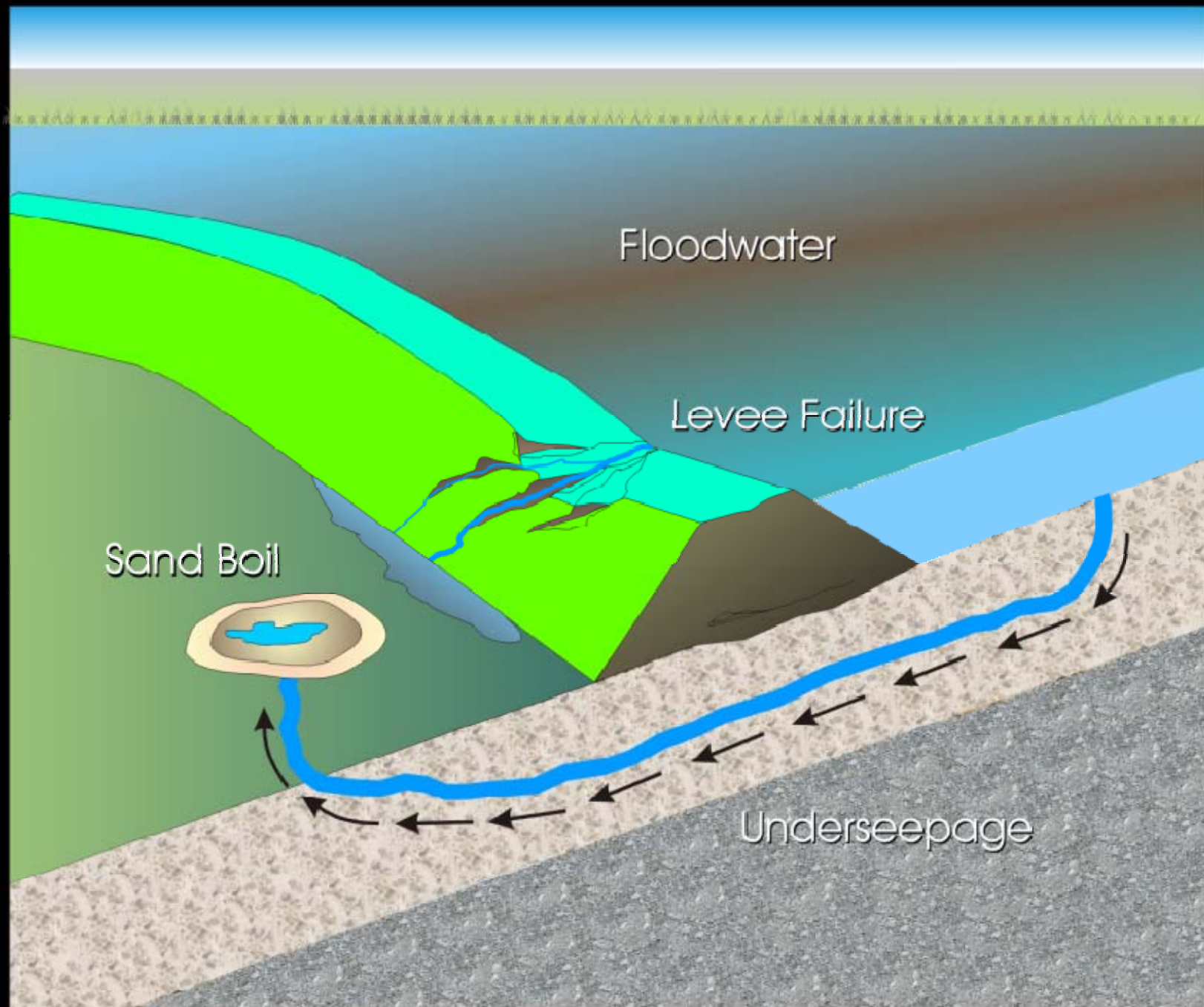
Impacts

- Old Hwy 61 (Business 61) north of the entrance to the Port of Vicksburg is predicted to overtop.
- Port traffic will be re-routed through downtown Vicksburg



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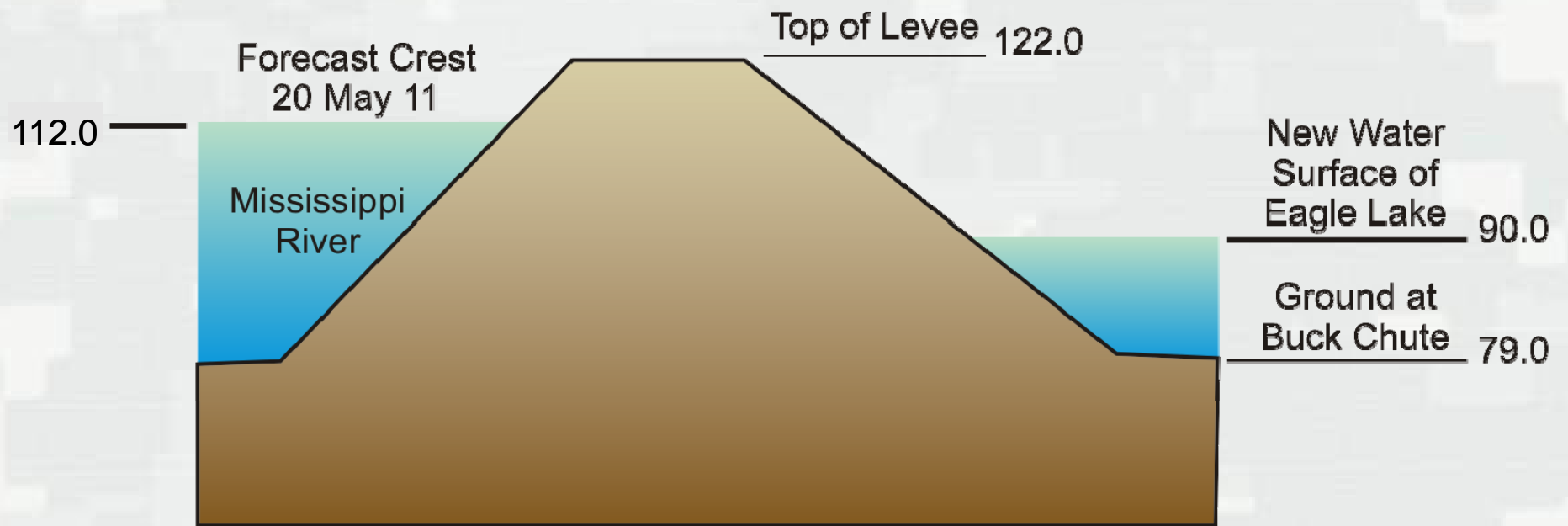
Buck Chute

- Constructed dike around sand boils - approximately 2 acres
- Cleared and backfilled the approximately 2 acres with 20,000 cubic yards of sand
- Capping the approximately 2 acres with 2 feet of clay fill
- Increase Eagle Lake water level to elevation 90.0



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Buck Chute



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Spreading Clay Capping at Buck Chute



Legend

----- Levee

Yazoo Backwater Area

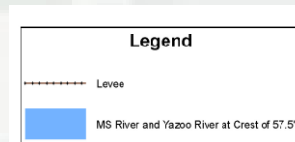


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Emergency Improvements to Yazoo Backwater Levee

- East of Highway 61, MS Levee Board is raising one low area approximately 1 foot to elevation 107
- West of Highway 61, Corps of Engineers is raising 2 low areas approximately 1 foot to achieve elevation 107
- Corps of Engineers removing cattle guards and backfilling with clay material
- Corps of Engineers installing 4 miles of polyvinyl from main line Mississippi River Levee to Steele Bayou Control Structure to protect the levee from scour when overtopped at stage 56.3





Mississippi River Unprotected Areas Estimated Inundation at 57.5 Crest



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Mississippi River Unprotected Area at Elevation 107 (57.5 Vicksburg Gage)

Total acres impacted	200,000
Cropland Impacted	117,000
Cropland Losses	\$128.5 Million
Structures Impacted	240
Value of Structures Impacted	\$8.3 Million





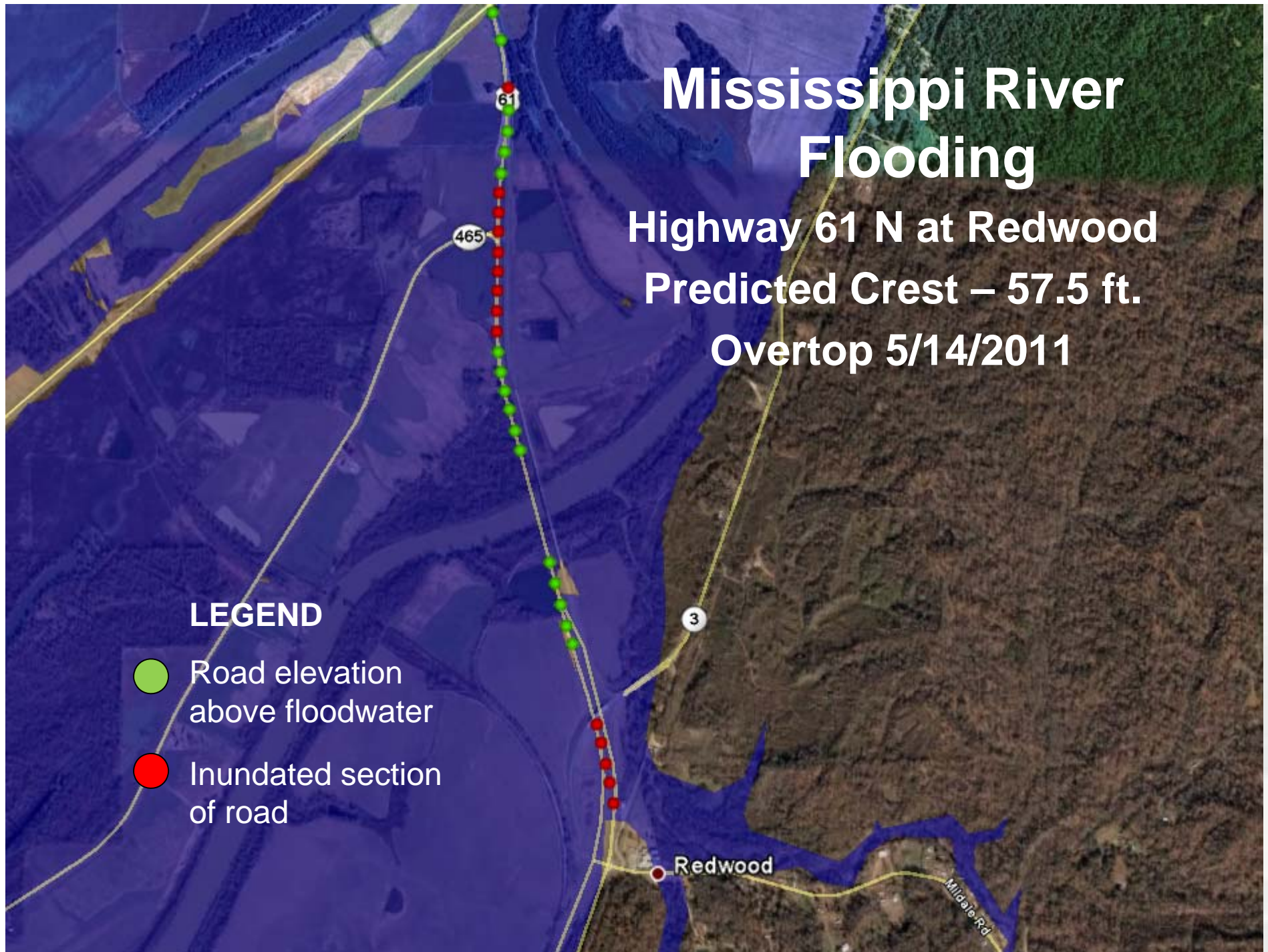
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Mississippi River Flooding



Highway 61 N at Redwood
Predicted Crest – 57.5 ft.
Overtop 5/14/2011

LEGEND

-  Road elevation
above floodwater
-  Inundated section
of road



LEGEND

-  Road elevation above floodwater
-  Inundated section of road

**Mississippi River
Flooding
Highway 3
Predicted Crest – 57.5 ft
Overtop 5/19/2011**



LEGEND

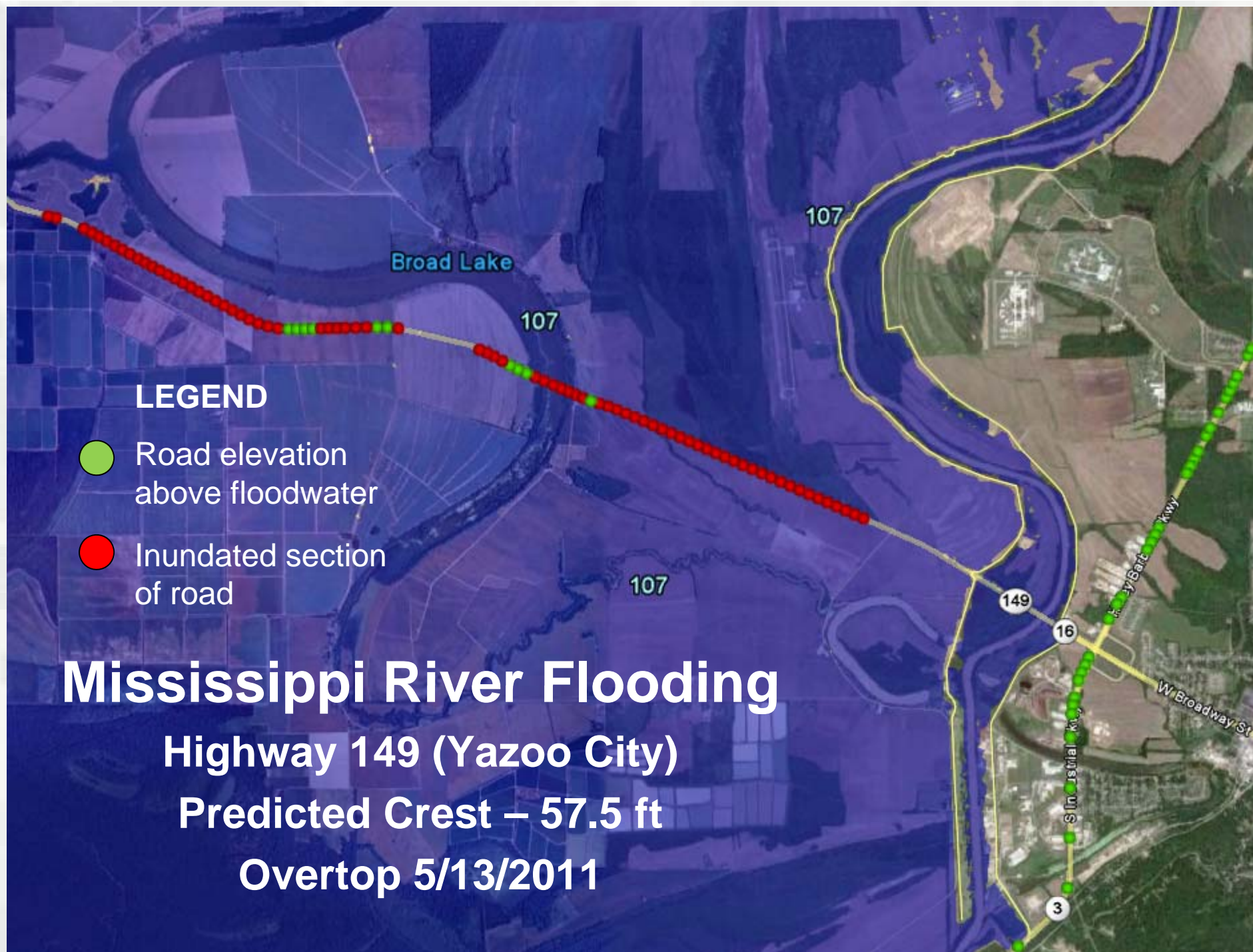
- Road elevation above floodwater
- Inundated section of road

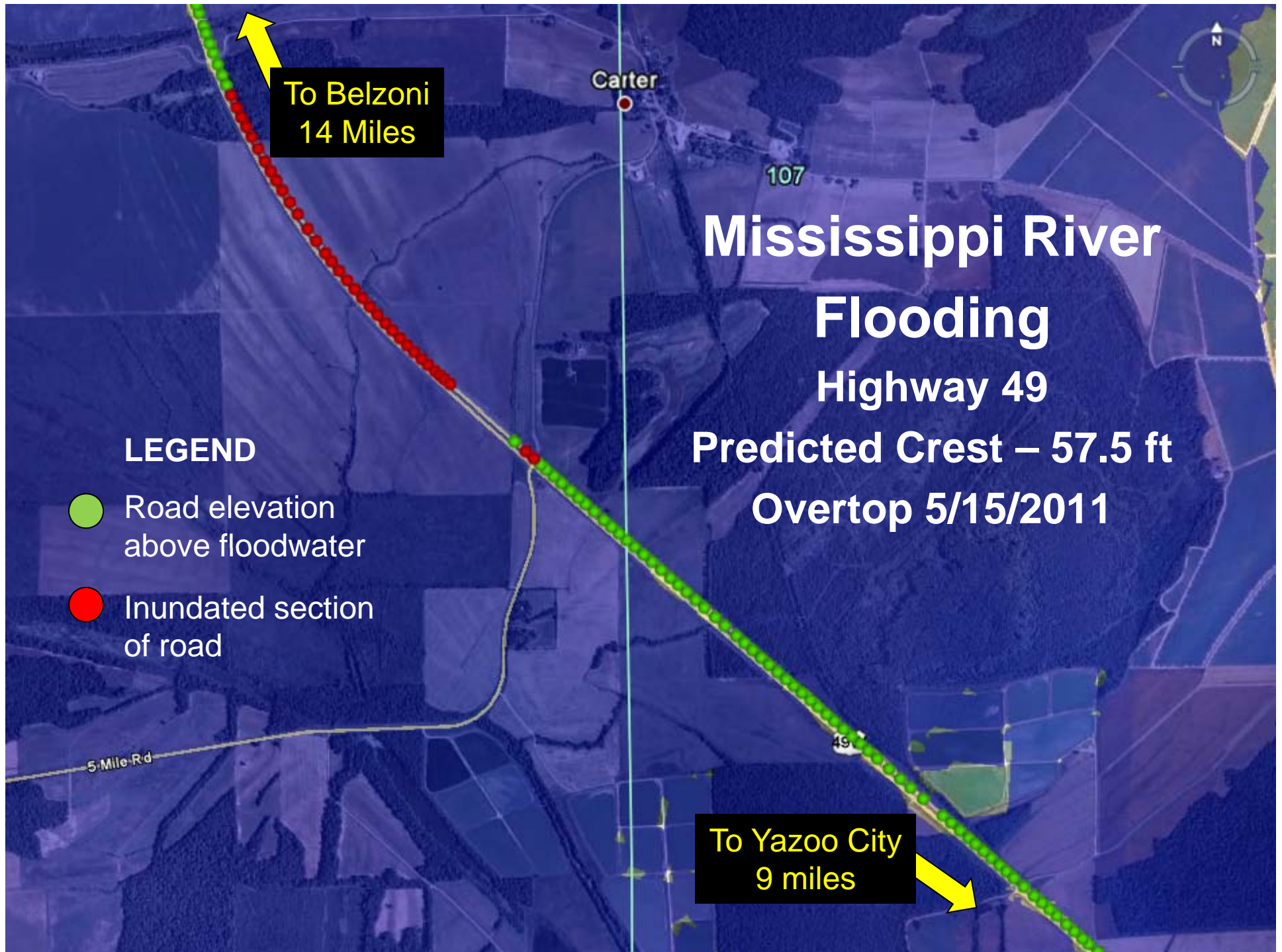
Mississippi River Flooding

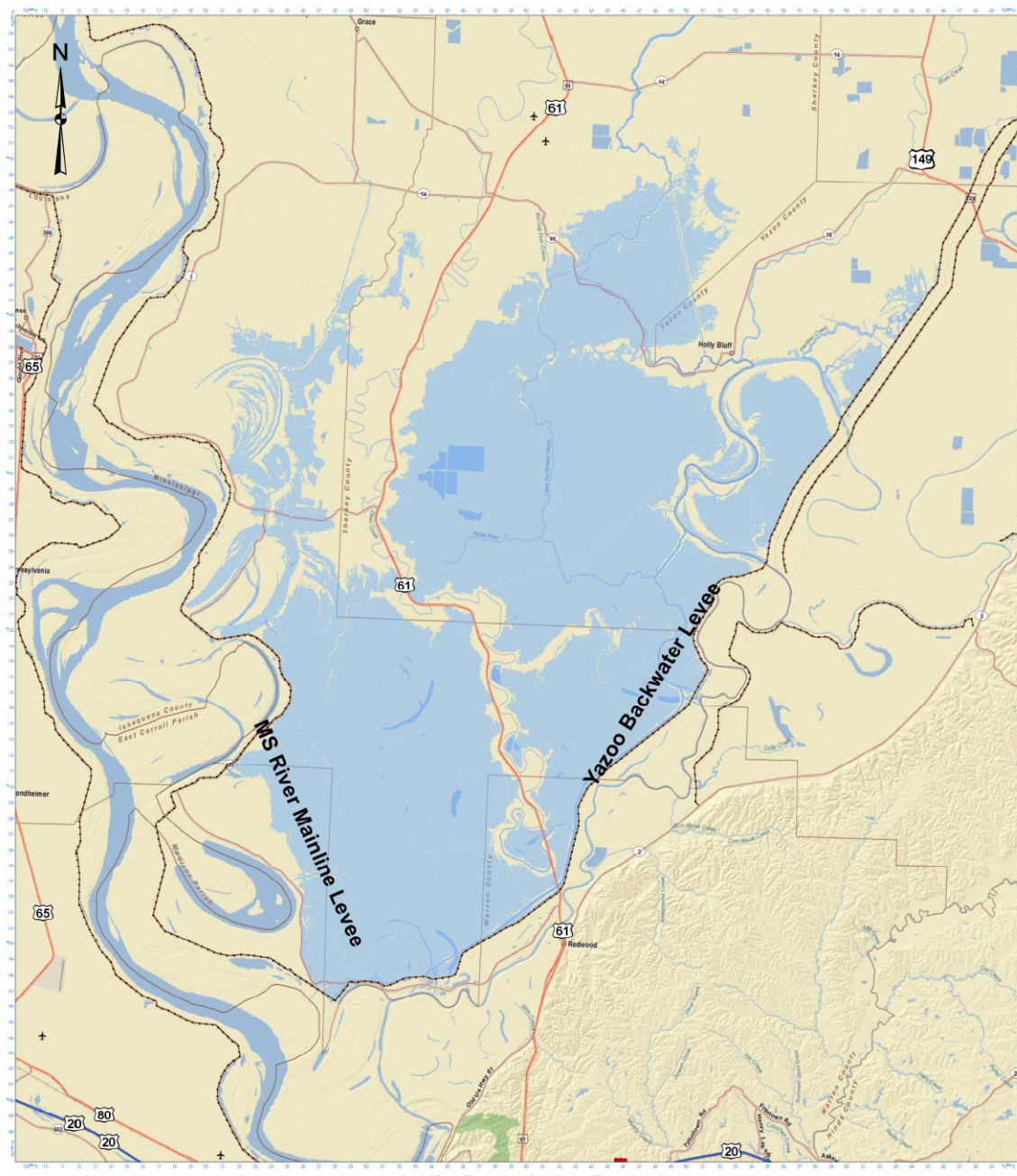
Highway 149 (Yazoo City)

Predicted Crest – 57.5 ft

Overtop 5/13/2011







Yazoo Backwater Estimated Inundation at elevation 94.0 (normal rainfall)



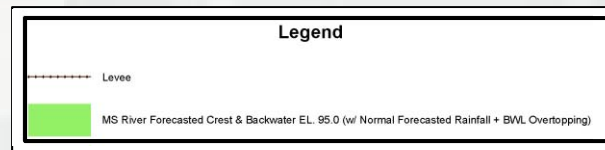
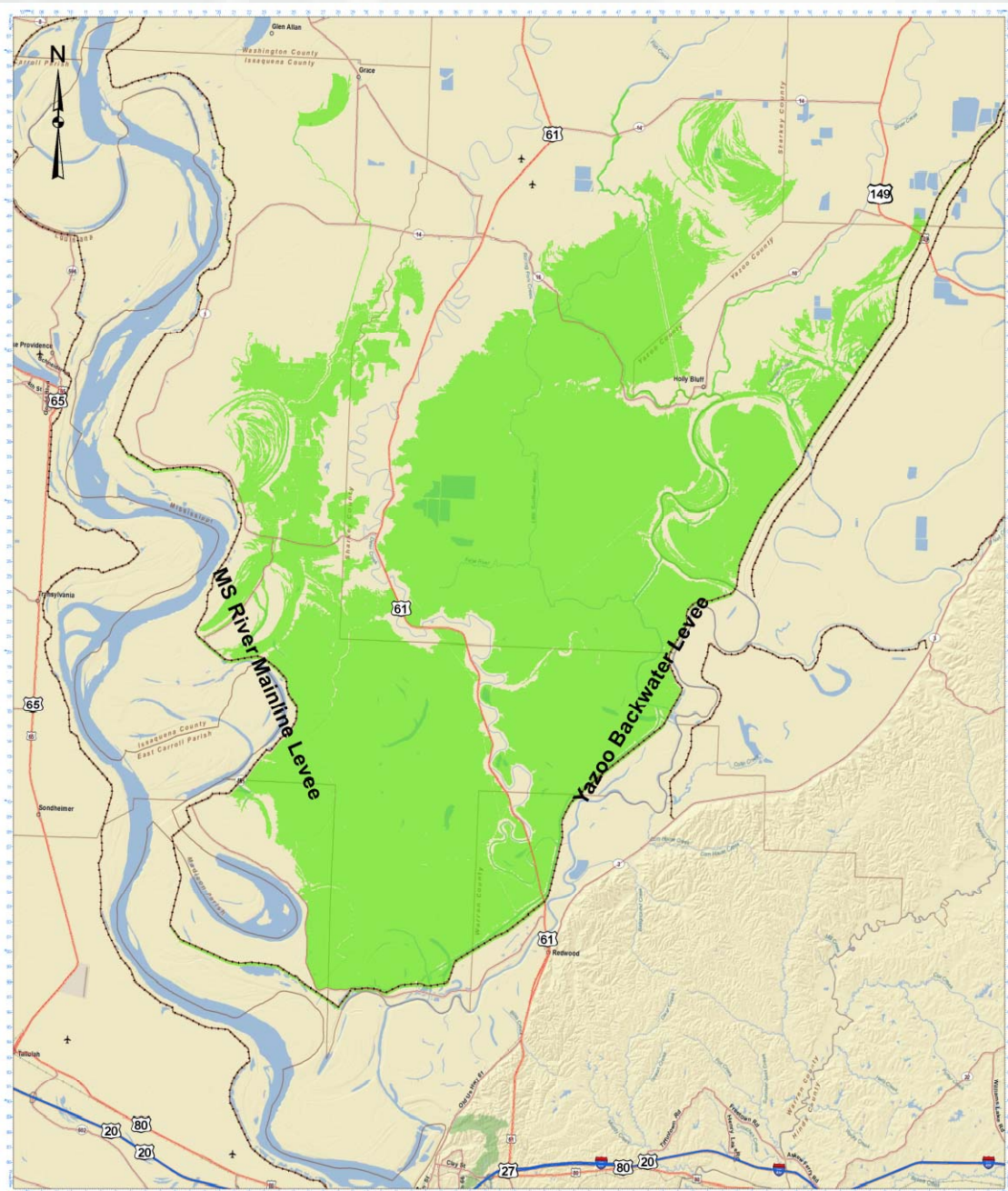
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Yazoo Backwater at Elevation 94

Total acres impacted	248,000
Cropland Impacted	86,000
Cropland Losses	\$78 Million
Structures Impacted	8
Value of Structures Impacted	\$150,000



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Yazoo Backwater Estimated Inundation at elevation 95 (Yazoo Backwater Levee Overtopped)



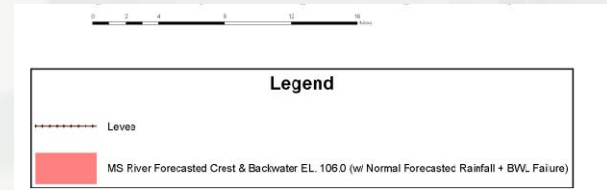
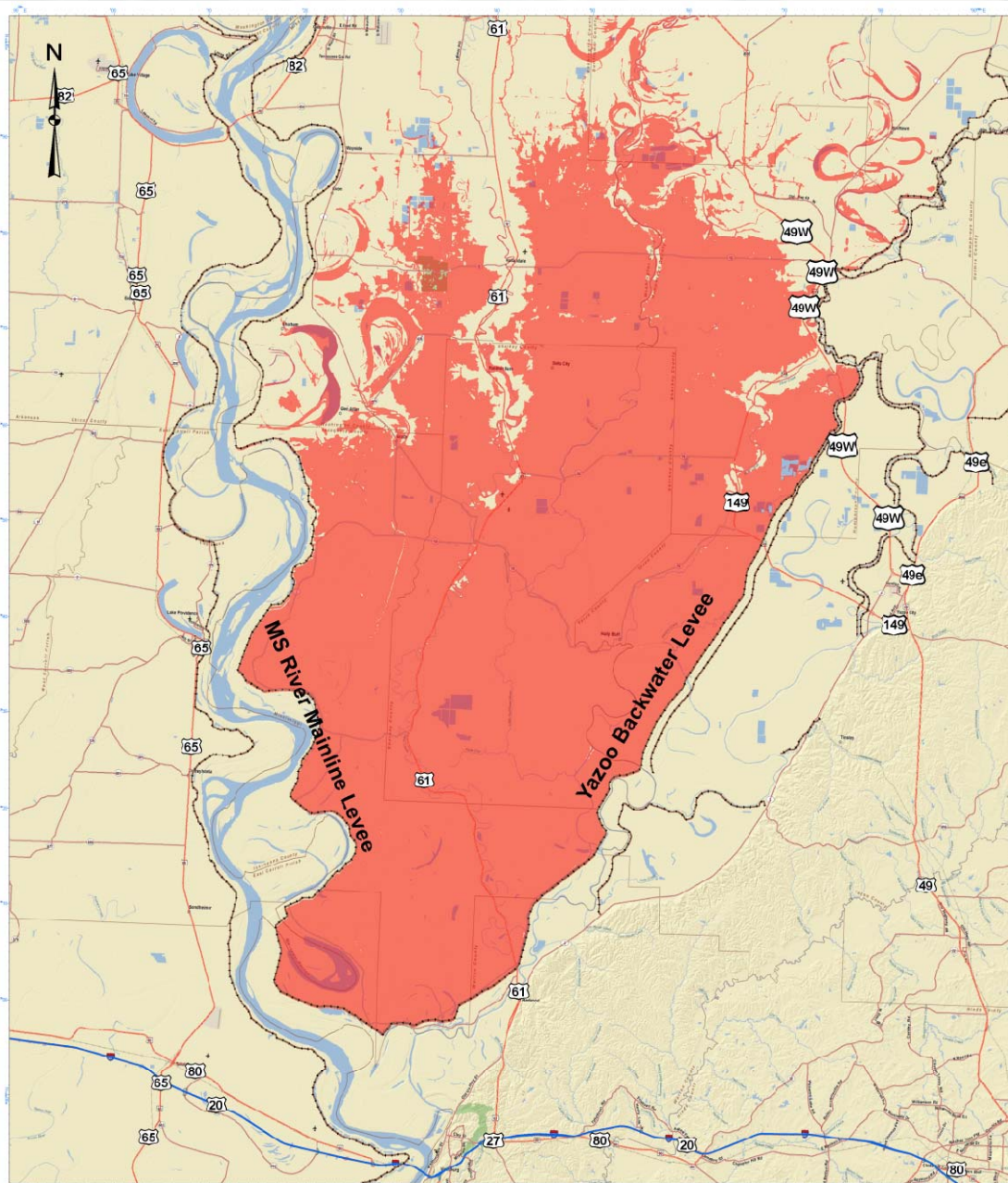
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Yazoo Backwater at Elevation 95

Total acres impacted	285,000
Cropland Impacted	110,000
Cropland Losses	\$99 Million
Structures Impacted	30
Value of Structures Impacted	\$600,000



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Yazoo Backwater Estimated Inundation at elevation 106.0 (Yazoo Backwater Levee Crevassed)



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Yazoo Backwater at Elevation 106

Total acres impacted	850,000
Cropland Impacted	517,000
Cropland Losses	\$535 Million
Structures Impacted	4,200
Value of Structures Impacted	\$138 Million



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As of 5/5/11

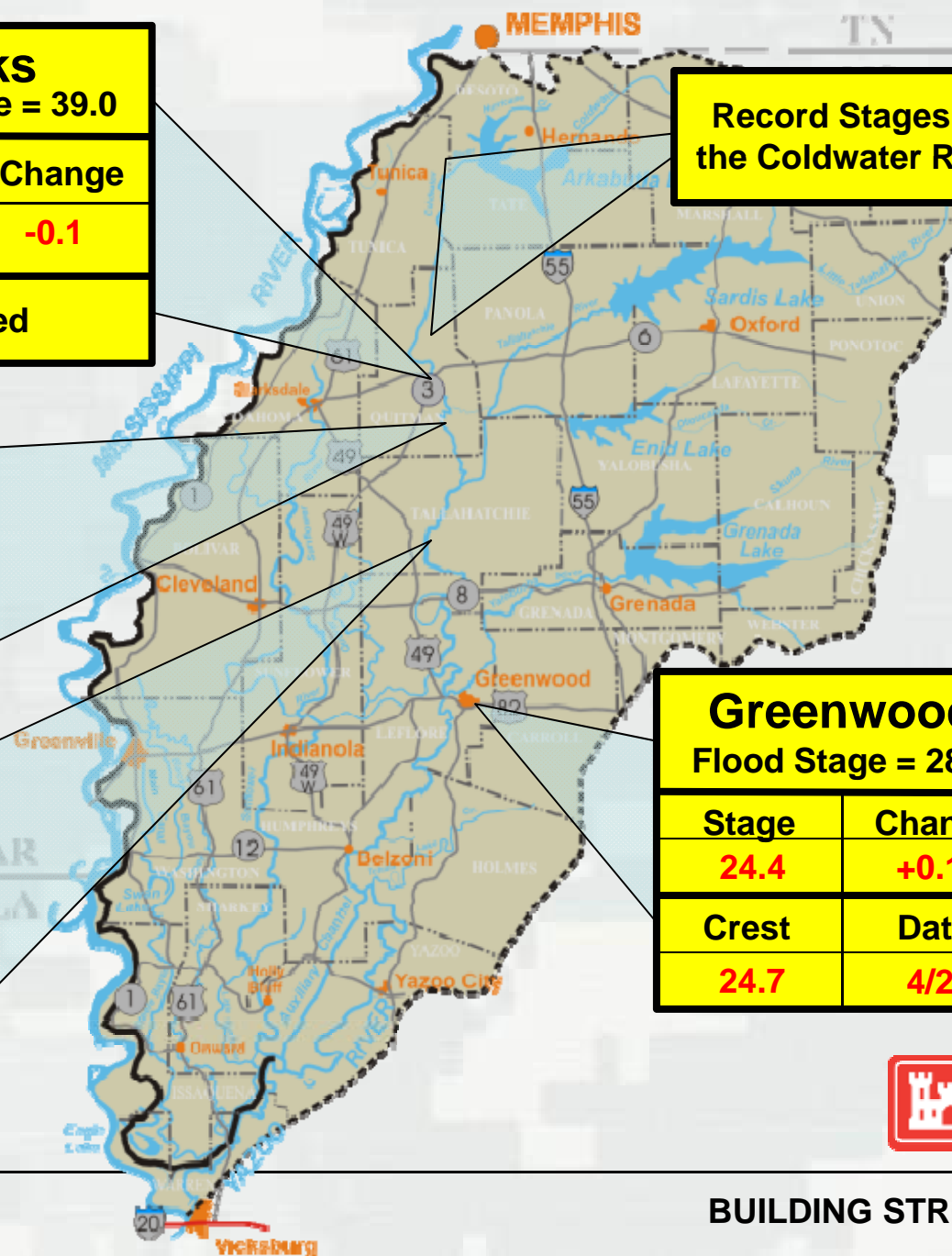
Marks	
Flood Stage = 39.0	
Stage	Change
40.8	-0.1
Crested	

Record Stages on
the Coldwater River

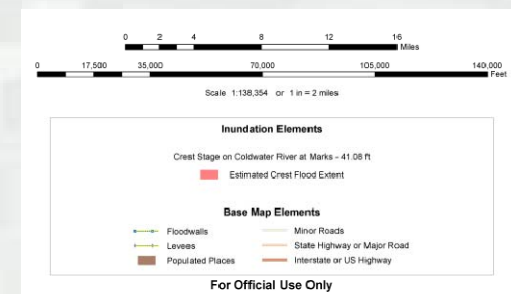
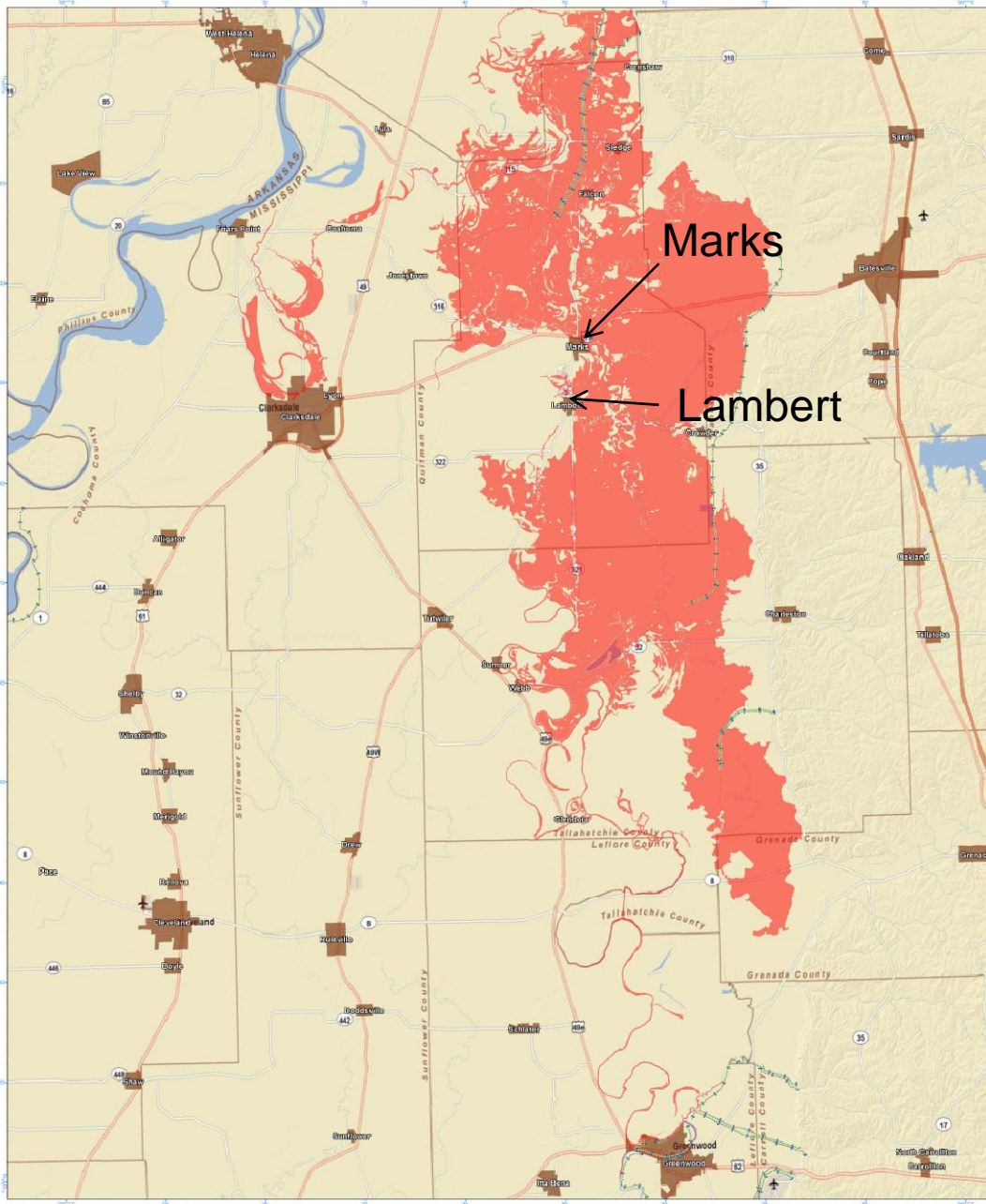
Lambert	
Flood Stage = 26.0	
Stage	Change
32.3	+0.1
Crest	Date
cresting	

Swan Lake	
Flood Stage = 19.0	
Stage	Change
22.7	-0.2
Crest	Date
23.3	5/1

Greenwood	
Flood Stage = 28.0	
Stage	Change
24.4	+0.1
Crest	Date
24.7	4/29



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Marks Area



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Arkabutla Lake

Spillway = 238.3

Stage	Change	Crest
238.0	+0.2	238.4
% Full		In. Rem.
98.1		0.2



Sardis Lake

Spillway = 281.4

Stage	Change	Crest
266.6	+0.3	267.0
% Full		In. Rem.
49.9		8.8



As of 5/5/11



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Enid Lake Spillway = 268.0		
Stage	Change	Crest
252.2	+0.3	252.5
% Full		In. Rem.
40.6		12.0



Grenada Lake Spillway = 231.0		
Stage	Change	Crest
214.9	+0.1	215.5
% Full		In. Rem.
36.3		11.3



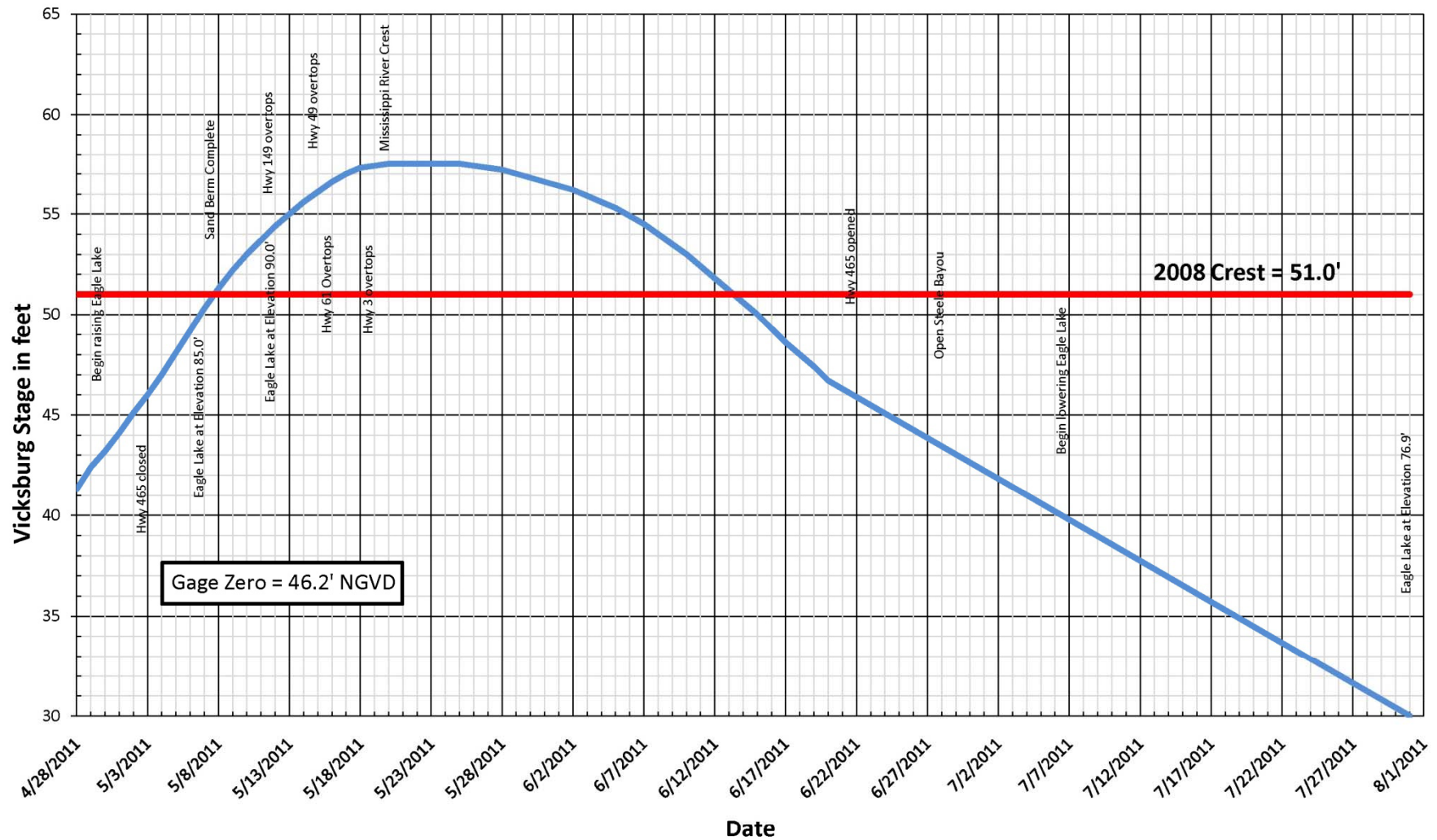
As of 5/5/11



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2011 Flood Estimated Timeline - Vicksburg Area

5/5/11



America's Watershed: A 200-year vision

An Intergenerational Commitment

Our people ...

- Enjoy a quality of life unmatched in the world.
- Lead secure lives along the river or tributary.
- Enjoy fresh air and the surrounding fauna, flora, and forests while hunting, fishing, and recreating.
- Travel easily, safely, and affordably.
- Drink from and use the abundant waters of any river, stream, or aquifer.
- Choose from an abundance of affordable basic goods and essential supplies that are grown, manufactured, and transported along the river to local and world markets.

- ❖ National Security & Comprehensive Flood Control
- ❖ Environmental sustainability & recreation
- ❖ Infrastructure & energy
- ❖ Water supply & water quality
- ❖ Movement of goods; agriculture & manufacturing

Leveraging science, engineering, technology and public policy